

Potamogetons of California.

J. W. Rollins.

1. *P. natanus*
2. *P. Claytonii* - Saurius Is. Oreg.
3. *P. Conchitis*,
4. *P. amplexifolius* - Oreg. - Sierra Vol
5. *P. gramineus* - Rocky Lake
6. *P. lucens* - Mt. Klam.
7. *P. prolongus* - Sierra Co.
8. *P. perfoliatus* - Oreg. Nev.
9. *P. compressus* - Oreg.
10. *P. hiogarrinus* - Walker Basin
11. *P. paniciflorus* - S. F. (Vang) - Oreg. (Hornell)
12. *P. pumilus* x

California Polymogiton
for Mr. Lorenzo Watson, Cambridge
with small book of unfinished descriptions

44

641
1087
1088

* recent fruit obliquely obovate, rugose when dry. ~~marked~~ ^{marked} ~~by~~ the style terminating its face; outlet obscurely 3-keeled, its ~~round~~ ^{round} ~~sides~~ ^{sides} ~~nearly~~ ^{nearly} ~~always~~ ^{always} with a small deep ~~in~~ ⁱⁿ ~~the~~ ^{the} middle;

1. P. natans, L.

stem "stout", simple or sparingly branched; floating ^{coarctate} leaves all long-petioled, elliptical or ovate, ^{thin} ~~thin~~ ^{rigid} ~~rigid~~ ^{in the} ~~in the ^{plumbeous} ~~plumbeous~~ ^{at base} ~~at base~~ ^{obtusely} ~~obtusely~~ ^{obtusely} but with a blunt point, 21-29-nerved; upper submersed leaves lanceolate, early perishing; lower ones ^{which are simple, long petioled, of the} ~~early~~ ^{gran-like thickish,} ~~or late~~ ^{very slender,} in the season ^{of the} ~~of the~~ ^{of the} 3-4 long, barely 1" wide; upper stipules very long, acute; peduncle about the thickness of the stem; ~~erect~~ ^{erect} spikes cylindrical, densely fruiting, 1-2' long; ^{upper} ~~upper~~ ^{portion} ~~portion of the embryo elliptically ^{incurved} ~~incurved~~ ^{pointing obliquely} ~~pointing obliquely~~ downwards. In ponds & ~~ditches~~ ^{ditches} ~~in~~ ⁱⁿ ~~Aug. & Sept.~~ ⁱⁿ ~~the~~ ^{the} ~~spallow~~ ^{spallow} water ^{sometimes} ~~sometimes~~ ^{with no} ~~with no ^{submersed} ~~submersed~~ ^{leaves} ~~leaves~~ ^{in deep} ~~in deep ^{water with} ~~water with ^{no} ~~no~~ ^{floating ones.} ~~floating ones.~~ ^{the var. protinus. Hook.} ~~the var. protinus. Hook.~~ ^{is to be looked} ~~is to be looked~~ ^{for, on} ~~for, on ^{early} ~~early ^{submersed,} ~~submersed, ^{in deep} ~~in deep ^{flowing} ~~flowing ^{water.} ~~water.~~~~~~~~~~~~~~~~~~~~~~

P. Clampturii, Hookⁿ.

Stems simple or branching above,
compressive, rising sometimes to the
height of $4\frac{1}{2}$ ' from creeping root-
stocks, which send out fibrous radicles;
floating leaves numerous, often oppo-
site, varying from $1-1\frac{1}{2}'$ long, 11-17
nerved, varying from oval to lanceo-
late or oblanceolate, mostly acute
and tapering into a shortish, flat
petiole; the lower ones, which are
~~roughly~~ dilated ^{petioles} ~~or~~ ^{at base}, are
very numerous, ^{& approximate} 2-ranked, mem-
branaceous and very delicate,
mostly linear ($2-5'' \times 1'' \frac{1}{2}''$ wide), serrate,
the space enclosing the midrib
coarsely cellular-reticulate; stipules
obtus; spikes numerous, densely fruit-
ing, equaling the thickened pedun-
cle; fruit obliquely round-obovate, three-
keeled, nutlet not hard, cochleate, distinctly
impressed on the sides, embryo convolute
to $1\frac{1}{2}$ circles, the apex pointing
obliquately upwards.

We have seen ~~few~~ but three
immature & imperfect specimens
of this plant (from Tanner's Island
and elsewhere in Oregon)

P. amplifolius Don

Stem stout, simple, of very
variable length; floating leaves
linear deep water often ^{sometimes very large} oval
or lance-ovate, sometimes cordate,
many nerves obtuse or abruptly acute,
~~with numerous~~ ^{many} ~~nerved~~ ^{nerved}, equalling or
exceeding their petioles; submerged
ones often very large (reaching 7 by 2), mem-
branaceous, lanceolate or rarely bi-
ovate, acute at each end, much curved,
with broad undulations, ~~and~~ ^{and} ~~6-8~~ ^{principal} bryo-
somes and coarsely reticulate,
on short petioles; stipules very
long, acuminate, ~~at~~ at first
closely investing the stem; peduncles as
much thickened, longer than the
elongated densely ^{long} ~~fruit~~ ^{spikes},
fruit rather obliquely obovate, the back
rounded & bluntly keeled; nutlet slightly
impressed on the side, & with a rather il-
l-defined sharp side keel, ⁺ fr. maturing in
Aug. & Sept.

* In shallow water sometimes with prominent, adpress. leaves, and in deep water with no floating ones.

the following

Var. heterophyllus, Fries

This is the ~~mediate~~ and more common form, with lower leaves shorter than those of var. graminifolia, Fries, lanceolate & more rigid.

* Stipules large, obtuse, often spreading

P. lucens, L

Stems rather thick, branching,

sometimes very large; leaves all submerged or rarely the upper ones floating, petiolate or sessile ² below oval

or lanceolate often shining, numerous, mostly chartaceous or membranaceous, usually acute or mucronate, crisped or serrulate at the margins; spikes 1-2

* long on longer thickening peduncles; fruit rounded, compressed, usually slightly keeled. Embryo above circularly incurved.

Fruit usually late in maturing.

Of this species, which has numerous forms and is uncertain as to its limits, we have on hand from this region but two specimens, each of which approaches the

Var. Connecticutensis which has stem flexuous, leaves all submerged, short petiolate, lanceolate,

long-mucronate, crisped on the margin & much twisted, not shining; fruit

obovate, distinctly keeled, nutlet
thick and hard.

Of our ~~former~~ ^{two} western forms
No 1 (Mission Dolores, Bolander) has
a straighter and more slender stem,
leaves longer (sometimes 10') with
flatter, not crisped, shining, a ^{distinct}
fewer nerves, sessile; stipules much
spreading; fruit thicker, less keeled
* upper portion of embryo less trans-
verse.

No 2, (California, Kellogg & Huffer)
has its stem rather zigzag; leaves
of a pale green, lance-oblong, short-
petioled, obtuse or with an abrupt, blunt
point, but slightly waved or crisped,
stipules erect, cartilaginous, shining;
spike not compact, flowers in verti-
cils; fruit watery.

P. prolongus, Muhlben.

White stem very long, ^{glabrous},
branching above; leaves of a light
green, lance-oblong or lanceolate,
cordate, ^(sometimes 10' long) half-clasping, ~~obtusely~~ ^{obtusely}
obtusely with a boat-shaped
curvature at the extremity, thence
often splitting ~~in~~ ^{apex} when
pressed flat; stipules white, long,
scarious, obtuse; peduncles
sometimes reaching 1 1/2', incrassate;
spikes sparsely fruiting; acheni-
um obliquely obovate, compressive,
sharply keeled when dry; style
facial; nutlet impressed; embryo
curved above into an oval.

Grows in ponds also in deep water.
Fruit (rarely found) ripening late.
We have, as yet but a single speci-
men, with long crumpled leaves, from
Cal. by Mr. Lemmon, Sierra Co.

L

P. perfoliatus, L.

M Stems rising from running rootstocks. Branching; leaves all submused, membranous, orbicular, ovate or lanceolate from a cordate clasping base, mostly obtuse, often scabrous-serrulate; stipules often, early withering; Spikes 1-1½ ^{mostly} long, on ~~the~~ ^{shortish} peduncles rarely elongated. Fr. irregularly obovate, obtusely margined; embryo incurved in an oval. Fr. mature Sept. to Oct.

Var. lanceolatus, Robt. Langer; leaves long lanceolate (3' to sometimes 4½'), ~~from a cordate clasping base~~; usually acuminate & wavy, peduncles thickened.

We have from this district, none of the short leaved eastern and European forms, but they are still in some variety, Oregon furnishes from different localities, two spe-

cinereus (probably from deep
water), which have peduncles
not incrassate 8' and 8 1/2' long
with spikes loosely ~~flower~~ ^{paniculate} verticillate,
and Mr. Watson gathers in
the Truckee River, Nevada,
a plant, bearing a ^{paniculate} ~~dense~~ flower-
ing ^{spike} on a 1/2' peduncle and leaves
2 3/4' by 5' and very obtuse.

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P. Niagaraensis, Tuckerm.

Stem much flattened, ^{2 edged, somewhat ribbed} branching, some-
times rooting from the lower joints, 1-3 long;
leaves all submersed, linear, acute, with
a mucronate tip, alternate to
the subpetiolate base, three or
sometimes five nerved, the middle
compound below of five nerves,
about 2' long by 1" wide; stipules
(sometimes 3" long) obtuse when
young, but perishing also be-
coming ^{with their persistent nerves} setose; pinnules less
than 1/2' long clavate, compressed;
spikes ^{few} capitate. ~~2~~ flowers;
fruit ^(rare) reddish, compressed, with a
winged and toothed keel and
angled face, ~~embryo~~ upper
portion of embryo circularly incurved
and directed transversely below
its middle. Ang.

Kc? only from Walker's basin, Cal.
the Cr. Rothrock; its leaves usually
5-nerved and the pinnules longer
than in the eastern forms. No fruit.

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P. pauciflorus, Ph.

Stems slender, sometimes thorn-like
compressed, very branching, 8' to about
20' high; leaves narrow linear, 1'-2' long
& seldom 1/2" wide, ^{tapering to a nearly sessile point} ~~as little~~ ^{obscurely}
3-nerved; stipules obtuse, ~~stipules~~ cap-
itate, ~~2-3 flowered~~, peduncles short
rather club-shaped, bearing capitate
spikes of 2-3 flowers; fruit roundish
lenticular, with its back more or
less crested & dentate; embryo
annularly incurved above.

Fruit maturing in Aug. and Sept.

Two forms are before us ^{respectively} from

Cal. and Oregon, of which the former,
from near San Francisco (Dr. Vasey, 1876)

is very slender, nearly simple, with very
few, narrow leaves, longer peduncles and
^{small} fruit scarcely winged. That from San-

ric's island, Oregon, (Mr. Howell, 1876)

has a ^{very branching} dichotomous stem, with ~~very~~
numerous, broader leaves above and
fruit more winged & dentate

A very variable species, approaching

(perhaps too early for separation) to
P. Kingarussis by one extreme and
P. pusillus by the opposite, - the last
mentioned var.

P. pusillus, L.

Stem slender, compressed
or nearly cylindrical,
branching; leaves linear,
very variable in width,
obtuse and mucronate or
acute, sessile, 1-5 nerved,
biglandular at the base;
~~stipules, mostly obtuse~~
~~spikes capitate or from~~
^{intercepted, or often capitate}
~~intercepted~~, or peduncles
mostly long, subcompressed
and thickened, 2-8 flowered;
fruit obliquely broad-elliptical,
scarcely or very bluntly keeled;
upper portion circularly incurved,
with its apex directed variously
downward. ^{Pools and ditches.} Fruit maturing from June to August.
Our district has, thus far, furnished us but
few forms of this very variable genus, of
which the more common is the
Var. vulgaris, Fries. Slender, very
branching; leaves narrow-linear, about $\frac{1}{2}$ "
wide, often obtuse, 3-nerved. Very rarely with
a few floating, lanceolate, 5-nerved leaves.

John Johnson

Ellie Johnson

Lizzie Johnson

Mary McDonald
go '97

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var. tenuissimus, Mert. & Koch. Stem
very slender and much branched; leaves
very narrow, ^{scarcely more than $\frac{1}{16}$ "} acute or cuspidate, obsolete
3-nerved

My "40th" parallel's specimens
A portion of them noted in Report

8-12-3 *P. nutans*

9-20-50 *P. longicollis*

8-12-4 *P. gramin.* *B. heteroph.*

Group 11 (Bailey) *P. longif.* *B. long.*

8-12-5 *P. marinus* *occid.*

Aug 18 60 (Bailey) *P. prot. latif*

8-13-6 *P. pusillus* *B. vulg.* &

7-1-8 " " " *arboresc.*

21-6-3 *P. marinus* *occid.*

well-matched pair of the
A. 2 of the Utah var. occiden-
talis of *P. marinus* equal in
weight 25 of the small form of *P.*
marinus of *Enseba* - 12 specimens
of *Utah*, and only 8 of *P. pectinatus*
from Connecticut.

Dismiss of Mr. Thomas Scott
or An error corrected.

Disease of Mr. James Scott
or An error committed.
We learn in conversing with
the physicians who ^{reside} attended
~~that the late Mr. Scott~~^{had been} in the case
of the late Mr. Scott that we
had been misinformed in respect
to some points in the case. There
was no reason for considering that
the small tumor enclosing and
obstructing the esophagus was of
any serious nature. The quantity
of food taken for six days
amounted to about half a pound
of solid food, which had in
some degree passed into the bowels
and so also
therefore

no reason for considering that
the small tumors enclosing and
betraying the esophageal wall
~~of the~~^{of the} internal ulceration, which had made a
small passage into the trachea, indicated
two small collections of matter
injected about the point of the
tumors & below the small
structure. There was moreover no lining
whatever of either of the orifices of the
stomach - which are commoner parts
of continuous perforations. The lungs,
were extensively adherent to the walls
of the chest & evidently diseased in
structure, but were free from tubercles.

6393 P. C. loyt.

- (1) Soda Springs. *P. pensil.* var. *ten.* &
subvar. integrifolia
(2) 1783 " " *P. gran.* ? or *loyt.*
1978 *reflexus* H
2471 *reflexus* ?
1821 *pect. B. latif.*